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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,942	10/16/2003	Pete Bernier	1730.003US1	4588
7590 06/28/2004			EXAMINER	
Schwegman, Lundberg, Woessner & Kluth, P.A. P.O. Box 2938 Minneapolis, MN 55402			EASTHOM, KARL D	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/686,942	<b>Applicant(s)</b> BERNIER, PETE	
	<b>Examiner</b> Karl D Easthom	<b>Art Unit</b> 2832	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☐ Responsive to communication(s) filed on \_\_\_\_.

2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_ is/are allowed.

6) ☒ Claim(s) 1-17 and 20 is/are rejected.

7) ☒ Claim(s) 18 and 19 is/are objected to.

8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All    b) ☐ Some \* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.

4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: \_\_\_\_.

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1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 9-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant does not disclose a strap that includes steel and brass together.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan in view of Andes et al. Duncan discloses, except the shrink tubing, the claimed invention at Fig. 8, with 14b, flexible insulated core wire 12d electrically connected at one end to 14b, and insulated lead wire 14a. Andes discloses employing a shrink tubing for an RTD sensor such as that of Duncan at col. 8, lines 15-30 for the purpose of preventing corrosion, so that such a modification would have been obvious. For claim 2, the size of ordinary wires no. 22 with 1/64 inch plastic thereon renders the device on the order of about one-twentieth or an obvious variant since the number of wires changes from two to many as disclosed, depending on the operation, so that employing the correct number of wires to suit the application would have been obvious, or using a small size to fit the device into tight spaces would have been obvious, a

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desire well known in the art, as provided below in this art of record. For claim 3, the strands 12a-12d are twisted, or braided, where a twist is a simple braid, at col. 4, lines 60-75. For claim 15, the heat shrink material must be heated.

5. Claims 1, 15-17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Andes et al. Adams discloses, except the shrink tubing and soldering, the claimed invention at Fig. 1, with flexible insulated core wire 10/11, electrically connected at one end to RTD 13, with soldering (claim 20) and insulated lead wire 10/11. Andes discloses employing a shrink tubing for an RTD sensor such as that of Adams at col. 8, lines 15-30 for the purpose of preventing corrosion, so that such a modification would have been obvious. For claim 17, strain relief is 12.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan in view of Andes et al., further in view of McQueen '385. Duncan with Andes discloses the claimed invention as noted except the size where here in the alternative more motivation is added. McQueen at the bottom of cols. 2 and 6, discloses such a size as a desirable quality for an RTD sensor so that same would have been obvious to fit the device into tight spaces.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan in view of Andes et al., further in view of Jameson. The claimed invention is disclosed as noted above except the woven fiberglass insulation. Jameson discloses such insulation as 22 or 83 at cols. 3-4 for the purpose of securing RTD wires to an underlying core, so that it would have been obvious to warp the RTD wires of Duncan on a core having such an woven fiberglass insulation.

8. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan in view of Andes et al. and Jameson, further in view of Adams. The claimed invention is

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disclosed as noted above except the sensor material and banding strap. Adams discloses the material for sensing temperature at col. 2, lines 50-72 so that such a material would have been obvious where each reference discloses RTD's in general. For claim 6, see remarks for claim 20 above. For claim 7, the banding strap 12 of Adams is employed to secure the core wire and lead wire to the sensor.

9. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan in view of Andes et al., Jameson, and Adams, further in view of Ellman et al. The claimed invention is as noted except the material for the strap. Ellman at par. 37 employs steel or brass for the purpose of forming a band like that of Adams to form a secure connection so that such a material would have been obvious. For claim 10, the element is crimped in Ellman, so that it would have been obvious to form a tight connection. For claims 11-12, the wires of Duncan or Adams, exit at the same end, where for Adams it would have been obvious to make the connection to a device.

10. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan in view of Andes et al., Jameson, Adams and Ellman et al., further in view of Boehm et al. The claimed invention is disclosed except the use of two banding straps. Boehm discloses using same (30, 34) at Fig. 3 for the purpose of added protection so that the wires do not come loose. For claim 14, such a force would have been inherent or obvious given the two crimps where one of skill in the art recognizes that a pulling force of 5 pounds would most likely be met by the double crimp, or it would have been obvious to ensure the crimps can handle that much force in order to ensure a good connection.

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11. Claims 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan in view of Andes et al., further in view of Hannigan. The claimed invention is disclosed except the strain relief. Hannigan at col. 6, and Fig. 9 discloses strain relief 120 for the purpose of connecting an RTD sensor with a strain relief for more reliable connections, to leads for sensing, so that connecting leads in the manner claimed would have been obvious for the purpose of making a secure connection.

12. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duncan in view of Andes et al., further in view of McQueen<sup>1916</sup>. The claimed invention is disclosed essentially as noted above except the soldering. McQueen at col. 5 discloses shrink soldering or welding of an RTD to wires at col. 5, lines 20-67 for the purpose of ensuring proper lead connection so that same would have been obvious.

13. Claims 18-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The claims are allowable primarily because the method of using the second layer of heat shrink tubing as claimed is not suggested or disclosed. It is noted that McQueen employs two heat shrink layers 16 and 21, but the whole assembly as interpreted by the claims is not in the heat shrinkable material where there is no sealing of the temperature sensor of McQueen as claimed.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (571) 272-1989.

The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

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14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Karl D Easthom  
Primary Examiner  
Art Unit 2832

KDE